State of California
Department of Food and Agriculture
Division of Measurement Standards

Certificate Number: 3442(b)-00

California Type Evaluation Program

Certificate of Approval

for Liquid Measuring Devices

For:

Sponsler Electronic Flow Totalizer
Liquid-Measuring Device Indicating Element
Model: T650N-8X-XXXX-X-XXX-XX (see Model Designation Below)

Submitted by:

Sponsler Company Inc.
2363 Sandifer Blvd.
Westminster, SC 29693
Tel: (864) 647-2065
Fax: (864) 647-1255
Contact: Michael R. Sponsler

Standard Features and Options

Power on/off indicator
Stainless steel waterproof enclosure
Fault finding self diagnostic display
Eight digit electronic/mechanical totalizer (nonresettable)
Temperature out of range indicator
12 VDC "polarity insensitive" power system
Eight digit resettable liquid crystal display (LCD)
Electroluminescent backlighting
Electronic temperature compensator (uses standard 2 or 4 wire RTD probe)

Option: Model SP 824 thermal printer

Model Designation:

T650-8	X	-XXXX	-X	-XXX	-XX
Basic Model	Standard Enclosure (8x10x4)	Option	Range	Pump Control	Optional Enclosure Size
	F = Fiberglass S = Stainless Steel	TCIR = Temperature Compensation	C = 100 ohm K = 1000 ohm	Blank = None PCO = Pump Control Output	Blank = Standard Size FE = 16x12x8

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable technical requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: July 18, 2000

Mike Cleary, Director

Sponsler Company, Inc.
Sponsler Electronic Flow Totalizer
Model: T650N-8X-XXXX-X-XXX-XX

Application: The T650N truck totalizer may be used as primary indicating element when metering cryogenic liquids and liquid carbon dioxide. The flow totalizer is designed to operate with turbine flow meters and similar approved and compatible devices equipped with magnetic pick-up coils.

Identification: The identification badge is located on the front or the side of the "T650N" housing.

Sealing: A wire security seal can be threaded through drilled head bolts that secure the electronic flow totalizer door to the housing.

Operation: The T650N can be used to meter liquid carbon dioxide using single or dual piping method. When set in "dual pipe" mode from a sealable area inside the housing, the device will automatically correct for vapor return displacement.

Test Conditions: This certificate supersedes Certificate of Approval Number 3442(a)-96 and is issued to recognize suffix changes on the "T650N" model identification badge. The issuance of this certificate was based on information provided by the manufacturer and previous field evaluations. The change incorporates the identical microprocessor as the T575N (Certificate of Approval Number 4380-96). A field test was conducted to verify the application and performance. The previous test conditions are listed below for reference.

Certificate of Approval Number 3442(a)-96: This certificate superseded Certificate of Approval Number 3442-90 and was issued to include the Model SP824 thermal print printer. The T650N-TC-PR and the SP824 printer were submitted for evaluation. The SP824 printer is metrologically significant because the temperature is not visually indicated on the electronic totalizer and is recorded only on the printed ticket. The emphasis of the evaluation was on design, software application, and performance. A simulator was used to compare information in the electronic totalizer with the ticket printer.

Certificate of Approval Number 3442-90: Two tests and 401 402 gallons of liquid nitrogen were measured through a Sponsler Model SP2-15225B-AN turbine meter interfaced with the T650N-TC truck totalizer.

The results of the evaluations indicate the device complies with applicable requirements.

Type Evaluation Criteria Used: Title 4, California Code of Regulations, 2000 Edition.

Tested By: Charles Nelson (CA), Dan Reiswig (CA)